

Missouri, 6. Montana, 14. Nebraska, 6, 7. Nevada, 26 to 29. Oregon, 16. Rhode Island, 2, 3. South Carolina, 2. South New Hampshire, 1. New Jersey, 2. New Mexico, 21. New Dakota, 1, 6. Tennessee, 14. Utah, 29. West Virginia, 14. York, 1, 15. North Dakota, 10. Ohio, 2, 15. Oklahoma, 5. Wisconsin, 1, 10, 11.

SUNSHINE AND CLOUDINESS.

The sunshine is now recorded automatically at 18 regular stations of the Weather Bureau by its photographic, and at 26 by its thermal effects. The results are given in Table XI for each hour of local, not seventy-fifth meridian, time. The cloudiness is determined by numerous personal observations at all stations during the daytime, and is given in the column of "average cloudiness" in Table I; its complement or clear sky is given in the last column of Table XI.

COMPARISON OF SUNSHINE AND CLEAR SKY.

The sunshine registers give the *duration* of direct sunshine whence the percentage of possible sunshine is derived; the observer's personal estimates give the percentage of *area* of clear sky. It should not be assumed that these numbers should agree, and for comparative purposes they have been brought together, side by side, in the following table, from which it appears that, in general, the instrumental record of percentages of duration of sunshine is almost always larger than the observer's personal estimates of percentages of area of clear sky; the average excess for April, 1895, is 9 per cent for photographic records, and 12 per cent for thermometric records.

Difference between instrumental and personal observations of sunshine.

Photographic stations.	Instrumental.	Personal.	Difference.	Thermometric stations.	Instrumental.	Personal.	Difference.
Tucson, Ariz.....	82	77	15	Key West, Fla.....	83	69	14
Galveston, Tex.....	81	81	0	Vicksburg, Miss.....	81	78	3
Santa Fe, N. Mex.....	80	68	14	San Francisco, Cal.....	78	60	18
Salt Lake City, Utah*..	75	61	14	Salt Lake City, Utah*..	75	61	14
Denver, Colo.....	69	55	14	Columbus, Ohio.....	72	45	27
Dodge City, Kans.....	67	61	6	St. Louis, Mo.....	71	56	15
Helena, Mont.....	67	60	7	Atlanta, Ga.....	70	48	22
Cincinnati, Ohio.....	68	51	17	Norfolk, Va.....	69	67	2
Memphis, Tenn.....	62	56	6	Baltimore, Md.....	68	48	20
Spokane, Wash.....	62	51	11	Chicago, Ill.....	68	56	12
Kansas City, Mo.....	60	51	9	Marquette, Mich.....	67	56	11
Savannah, Ga.....	60	54	6	New Orleans, La.....	65	64	1
Cleveland, Ohio.....	59	51	8	Des Moines, Iowa.....	62	50	12
Portland, Oreg.*.....	57	45	12	Louisville, Ky.....	61	48	13
San Diego, Cal.....	57	48	9	Portland, Me.....	61	38	23
Eastport, Me.....	54	38	16	Rochester, N. Y.....	61	55	6
Washington, D. C.....	52	44	8	Little Rock, Ark.....	60	51	9
Bismarck, N. Dak.....	48	51	-3	Philadelphia, Pa.....	58	41	17
				Portland, Oreg.*.....	57	45	12
				Buffalo, N. Y.....	52	42	10
				Boston, Mass.....	50	36	14
				New Haven, Conn.....	50	46	4
				New York, N. Y.....	49	41	8
				Seattle, Wash.....	45	31	14
				Wilmington, N. C.....	43	48	-5

* Records kept by both registers.

WIND.

The *prevailing winds* for April, 1895, viz, those that were recorded most frequently at Weather Bureau stations, are shown in Table I.

Maximum wind velocities of 50 miles or more per hour were reported at regular stations of the Weather Bureau as follows (maximum velocities are averages for five minutes; extreme velocities are gusts of shorter duration, and are not given in this table):

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
		Miles				Miles	
Abilene, Tex.....	5	56	nw.	Fort Canby, Wash.....	13	60	s.
Amarillo, Tex.....	5	84	nw.	Do.....	14	71	se.
Do.....	6	68	nw.	Do.....	15	66	se.
Do.....	7	60	n.	Do.....	17	60	se.
Do.....	15	68	nw.	Hatteras, N. C.....	8	51	n.
Cheyenne, Wyo.....	6	60	nw.	Huron, S. Dak.....	5	51	nw.
Dodge City, Kans.....	5	54	n.	Do.....	14	56	se.
Do.....	6	50	e.	Idaho Falls, Idaho.....	14	52	s.
Do.....	15	64	nw.	Kittyhawk, N. C.....	8	52	se.
Duluth, Minn.....	21	54	nw.	Moorhead, Minn.....	14	55	se.
Eastport, Me.....	14	56	ne.	Nantucket, Mass.....	9	50	sw.
Do.....	15	60	e.	New York, N. Y.....	9	50	se.
El Paso, Tex.....	5	78	w.	North Platte, Nebr.....	6	53	sw.
Do.....	14	51	sw.	Pierre, S. Dak.....	26	50	ne.
Fort Canby, Wash.....	1	54	se.	Rapid City, S. Dak.....	6	52	nw.
Do.....	2	72	s.	Sioux City, Iowa.....	28	60	nw.
Do.....	3	60	s.	Walla Walla, Wash.....	1	50	sw.
Do.....	9	71	se.	Williston, N. Dak.....	5	50	nw.
Do.....	10	60	se.				

The *resultant winds*, as deduced from the personal observations made at 8 a. m. and 8 p. m., are given in Table IX. These latter resultants are also shown graphically on Chart II, in connection with the isobars based on the same system

of simultaneous observation; the small figure attached to each arrow shows the number of hours that this resultant prevailed, on the assumption that each of the morning and evening observations represents one hour's duration of a wind of average velocity; these figures (or the ratio between them and the total number of observations in this month) indicate the extent to which winds from different directions counterbalanced each other.

LOCAL STORMS.

Destructive or severe local storms were reported as follows: **1st.**—Louisville, Ky., thunderstorm; stock killed by lightning. Boone County, Ky., Stamford, Nebr., Pendleton, Oreg., and over eastern portions of Washington, windstorms.

2d.—Tampa, Fla., thunderstorm. Melbourne, Fla., windstorm.

5th.—Abilene, El Paso, Sulphur Springs, Bluff Dale, Fort Bliss, and Waco, Tex., and Gila, N. Mex., windstorms. Winnsboro, Tex., windstorm; 1 person killed and several injured. Amarillo, Tex., snowstorm. Chilton, Tex., hailstorm. Meade and Garden City, Kans., snowstorms. Over the southern portion of Stanton County, Kans., windstorm; cattle killed. Buffalo, Okla., snowstorm; cattle killed. Manhattan, Kans., and Madrid, Iowa, thunderstorms.

6th.—Dodge City, Kans., snowstorm; cattle killed. Deer Trail, Colo., snowstorm.

8th.—Washington, N. J., thunderstorm.

9th.—New Brunswick, Newton, and Junction, N. J., thunderstorms. Philadelphia, Pa., thunderstorm; 2 children killed by lightning. Seattle and Stillaguamish, Wash., thunderstorms. Pullman, Wash., windstorm.

10th.—Portland, Me., thunderstorm.